Aviation Safety Program Annual Technical Meeting
Agenda at a Glance

DAY 1			
Tuesday, May 10, 2011			
7:00	***Continental breakfast/registration***		
8:00	Welcome/Logistics, Richard Barhydt, *Deputy Program Director, Aviation Safety Program;* Jaiwon Shin, *Associate Administrator, ARMD; Doug Rohn, Program Director, Aviation Safety Program*		
8:30	"Program Overview," Doug Rohn, *Program Director, Aviation Safety Program*		
9:00	Atmospheric Environment Safety Technology (AEST) Project Overview, *Ron Colantonio, Project Manager*		
10:00	***Break***		
10:30	System-wide Safety and Assurance Technologies (SSAT) Project Overview, *Ashok Srvastava, Project Manager*		
11:30	Vehicle Systems Safety Technologies (VSST) Project Overview, *Paul Krasa, Project Manager*		
12:30	***Lunch (on your own)***		
	AEST Track	**SSAT Track**	**VSST Track**
	Session on Engine Icing Technical Challenge	**Session on Verification and Validation Technical Challenge**	**Session on Vehicle Health Assurance Technical Challenge**
2:00	**AEST-1** Engine Icing Technical Challenge *Joe Veres, NASA Glenn Research Center*	**SSAT-1** A New Approach to Certifying Safety in NextGen *Nancy Leveson, MIT*	**VSST-1** Assuring Aircraft Vehicle Health and Safety *Rick Ross, NASA Langley Research Center*
2:30	**AEST-2** High Ice Water Content Flight Campaign *Tom Ratvasky, NASA Glenn Research Center*	**SSAT-2** NextGenAA: Integrated Model Checking and Simulation of NextGen Authority and Autonomy *Ellen Bass, UVA*	**VSST-2** Future Concepts for Improved Airworthiness Management of Airframe Structures *Eric Haugse, Boeing*
3:00	**AEST-3** Engine Icing Performance Simulation *Phil Jorgenson, NASA Glenn Research Center*	**SSAT-3** Validation and Verification of Safety-Critical Integrated Distributed Systems *Kevin Driscoll, Honeywell*	**VSST-3** Self-Healing Material System Concepts for Mitigation of Crack Damage *Andy Newman, Keith Gordon, NASA Langley Research Center*
3:30	***Break***		
	Session on Engine Icing Technical Challenge	**Session on Verification and Validation Technical Challenge**	**Session on Vehicle Health Assurance Technical Challenge**
4:00	**AEST-4** Engine Icing Accretion Simulation *Bill Wright, NASA Glenn Research Center*	**SSAT-4** An Evidential Tool Bus for Flight Critical Software Systems *Natarajan Shankar, SRI*	**VSST-4** Sensory Materials for Damage Detection *Terryl Wallace, NASA Langley Research Center*
4:30	**AEST-5** Propulsion Systems Laboratory Engine Icing Modifications *Tom Hoffman, NASA Glenn Research Center*	**SSAT-5** Model-based Validation Testing for NextGen *Misty Davies, NASA Ames Research Center*	**VSST-5** Development and Testing of Propulsion Health Management *Gary Hunter, NASA Glenn Research Center*
6:00 to 8:00	***Poster and Demo Session & Reception***		
DAY 2			
Wednesday, May 11, 2011			
7:00	***Continental Breakfast / Registration***		
8:00	FAA Regulatory Structure and Relation to Research, Kathy Abbott, *Chief Scientific and Technical Advisor - Flight Deck Human Factors, FAA*		
9:00	***Break***		
	AEST Track	**SSAT Track**	**VSST Track**
	Session on Airframe Icing Technical Challenge	**Session on Software Health Management**	**Session on Crew-System Interactions and Decisions Technical Challenge**
9:30	**AEST-6** Airframe Icing Technical Challenge *Mark Potapczuk, NASA Glenn Research Center*	**SSAT-6** Directed Incremental Symbolic Execution *Suzette Person, NASA Langley Research Center*	**VSST-6** Effective Crew-System Interactions and Decisions Technical Challenge *Steven Young, NASA Langley Research Center*
10:00	**AEST-7** Swept-Wing Icing Research Update and Plans *Andy Broeren, NASA Glenn Research Center*	**SSAT-7** Monitor Synthesis for Software Health Management *Lee Pike, Galois*	**VSST-7** Flight Deck-Based Delegated Separation: Evaluation of a Merging and Spacing System Employing Synthetic and Enhanced Vision Technology *Randy Bailey, NASA Langley Research Center*
		Session on Data Mining and Knowledge Discovery Technical Challenge	
10:30	**AEST-8** Status of 3-D Ice Shape Measurement Effort *Sam Lee, NASA Glenn Research Center*	**SSAT-8** Vehicle Integrated Prognostic Reasoner (VIPR) *Dinkar Mylaraswamy, Honeywell*	**VSST-8** Integrated Pilot and Controller Procedures: Aircraft Pairing for Simultaneous Approaches to Closely Spaced Parallel Runways *Sandy Lozito, NASA Ames Research Center*
11:00	**AEST-9** Review of Super-cooled Large Droplet Facility Capabilities *Mark Potapczuk, NASA Glenn Research Center*	**SSAT-9** Virtual Sensors *Ashok Srivastava, NASA Ames Research Center*	**VSST-9** Hazard Integrity Monitoring and Integrated Alerting and Notification Methods *Maarten Uijt de Haag, Ohio University*

Aviation Safety Program Annual Technical Meeting
Agenda at a Glance

12:29	**AEST-10** Droplet Breakup Research *Mario Vargas, NASA Glenn Research Center*	**SSAT-10** Distributed Optimization for Aircraft Fleet Monitoring *Eric Chu, Stanford University*	**VSST-10** Methodology to Support Dynamic Function Allocation Policies *Karen Feigh, Georgia Institue of Technology*
12:00	***Lunch (on your own)***		
	Session on Atmospheric Hazard Sensing and Mitigation Technical Challenge	**Session on Data Mining and Knowledge Discovery Technical Challenge**	**Session on Loss of Control Mitigation, Prevention, and Recovery Technical Challenge**
1:30	**AEST-11** Atmospheric Hazard Sensing and Mitigation Technical Challenge Robert Neece, NASA Langley Research Center	**SSAT-11** Multi-variate Time Series Search in Large Databases *Kanishka Bhaduri, NASA Ames Research Center*	**VSST-11** Aircraft Loss of Control: Problem Analysis and Holistic Solution Approach *Chris Belcastro, NASA Langley Research Center*
2:00	**AEST-12** Lightning and Electromagnetic Effects Mitigation *George Szatkowski, NASA Langley Research Center*	**SSAT-12** Anomaly Detection in Heterogeneous Datasets *Santanu Das, NASA Ames Research Center*	**VSST-12** Modeling of Vehicle Flight Dynamics for LOC Mitigation Gautam Shah, *NASA Langley Research Center*
21:29	**AEST-13** Remote Sensing for Icing Conditions *Andy Reehorst, NASA Glenn Research Center*	**SSAT-13** Algorithms for Anomaly Detection in Distributed Databases *Kanishka Bhaduri, NASA Ames Research Center*	**VSST-13** Real-Time Vehicle Dynamics Modeling Gene *Morelli, NASA Langley Research Center*
3:00	***Break***		
		Session on Human Systems Solutions Technical Challenge	
3:30	**AEST-14** Lidar and Electro-Optics Sensing for Kinetic Air Hazards *Ivan Clark, NASA Langley Research Center*	**SSAT-14** NASA Human Systems Solutions Research *Michael Feary, NASA Ames Research Center*	**VSST-14** Advanced Control Methods for LOC Prevention *Irene Gregory, NASA Langley Research Center*
	Session on Atmospheric Hazard Sensors and Mitigation Technical Challenge	**Session on Human Systems Solutions Technical Challenge**	**Session on Loss of Control Mitigation, Prevention, and Recovery Technical Challenge**
19:59	**AEST-15** Smart Visual Awareness *Robert Neece, NASA Langley Research Center*	**SSAT-15** Designing Human-Automation Interaction Through Computational Modeling Of Cognition And The Dynamic Flight Environment *Eric Johnson, Georgia Tech*	**VSST-15** Propulsion Research for Aviation Safety *Ten-Huei Guo, NASA Glenn Research Center*
	SSAT Track B		
	Session on Verification and Validation Technical Challenge		
4:30	**SSAT-22** Automating the Generation of Heterogeneous Aviation Safety Cases *Ewen Denney, SGT*	**SSAT-16** System Design and Analysis: Tools for Automation Interaction Design and Evaluation Methods *Lance Sherry, GMU*	**VSST-16** Flight Planning and Guidance Methods *John Kaneshige, NASA Ames Research Center*
	DAY 3		
	Thurday May 12, 2011		
7:00	***Continental Breakfast / Registration***		
8:00	Industry Needs from Aviation Safety Research - Don Gunther, *Vice President of Safety, Continental Airlines*		
9:00	***Break***		
	VSST Track B	**SSAT Track**	**VSST Track**
	Session on Crew-System Interactions and Decisions Technical Challenge	**Session on Prognostics and Decision Making Technical Challenge**	**Session on Loss of Control Mitigation, Prevention, and Recovery Technical Challenge**
9:30	**VSST-22** NextDeck: Flight Deck Automation Designs for NextGen *Bill Rogers, Honeywell*	**SSAT-17** Subcycle-based Fatigue Damage Prognosis and Uncertainty Management *Yongmin Liu, Clarkson University*	**VSST-17** Analytical Validation Methods for Complex Nonlinear Systems Operating Under LOC Precursor Conditions *Chris Belcastro, NASA Langley Research Center*
			Session on Vehicle Health Assurance Technical Challenge
10:00	**VSST-23** The Alerting and Reasoning Management System (ALARMS) *Nathan Shurr, Aptima, Inc.*	**SSAT-18** Methodology for Prognostics, Uncertainty Representation and Uncertainty Management *George Vachtsevanos, Impact Technologies, LLC*	**VSST-18** Effect of Microstructural Damage Due to Environment and High Temperature Exposures on Fatigue Life in P/M Disk Superalloys *Sue Draper, NASA Glenn Research Center*
10:30	**VSST-24** Flight Deck Research Working Group Open Discussion on Flight Deck Systems and Operations *All*	**SSAT-19** Electronics Health Management *Kai Goebel, NASA Ames Research Center*	**VSST-19** Modeling and Detecting Wire Faults *Stefan Schuet, NASA Ames Research Center*
	Session on Loss of Control Mitigation, Prevention, and Recovery Technical Challenge	**Session on Research Test and Integration**	
11:00	**VSST-25** AirSTAR Flight Test Summary for Damage Accommodating Control Algorithms *David Cox, NASA Langley Research Center*	**SSAT-20** A Collaborative Approach to Conducting Research *Mike Venti, NASA Dryden Flight Research Center*	**VSST-20** Continuum Damage Mechanics Models for the Analysis of Progressive Failure in Open-Hole Tension Laminates *Cheryl Rose, Kyongchan Song, and Yingyong Li, NASA Langley Research Center*

Aviation Safety Program Annual Technical Meeting
Agenda at a Glance

12:29	**VSST-26** Flight Research Results of a Simple Adaptive Controller Test on the NASA FAST Aircraft *Curtis Hanson, NASA Dryden Flight Research Center*	**SSAT-21** Open Architecture for Data Mining and Predictive Health Management *Dimitry Gorinevski, MITEK*	**VSST-21** Advances in Structural Analysis Methods for Structural Health Management of NextGen Aerospace Vehicles *Alex Tessler, NASA Langley Research Center*
12:00	***Lunch (on your own)***		
	AEST Industry Session	**SSAT Industry Session**	**VSST Industry Session**
1:30	Guided discussion on industry needs for aviation safety research and compatibility of NASA research products with those needs Moderator: *Ron Colantonio, NASA Glenn Research Center*	Guided discussion on industry needs for aviation safety research and compatibility of NASA research products with those needs Moderator: *Mike Feary, NASA Ames Research Center*	Guided discussion on industry needs for aviation safety research and compatibility of NASA research products with those needs Moderator: *Sharon Graves, NASA Langley Research Center*
3:30	***Break***		
4:00 to 5:00	Conclusion to guided discussion and summary of main points	Conclusion to guided discussion and summary of main points	Conclusion to guided discussion and summary of main points